

REMARKS

Amendment to claim 29 is to correct a typographical error. No new matter has been added.

I. CLAIM REJECTIONS UNDER U.S.C. § 102

Claims 1, 2, 7-9, 11, 13-17, and 46 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 5,841,833 (Mazess). Applicant respectfully notes that in order to sustain a claim rejection under § 102, each of the claimed elements must be found, either expressly or inherently, in the cited reference.

Claim 1 recites a first scintillating material that has a first radiation detection characteristic, and a second scintillating material that has a second radiation detection characteristic. Claim 9 recites that each of the first conversion elements is made from a first material that has a first radiation-to-photon conversion characteristic, and each of the second conversion elements is made from a second material that has a second radiation-to-photon conversion characteristic. Mazess does not disclose or suggest the above limitations. Rather, Mazess discloses a high energy detector 37(a) having a scintillator 308, and a low energy detectors 37(b) having a scintillator 312 (figures 21-23). Notably, the *materials* making up the respective scintillators 308, 312 are the same, as indicated by the same material shading shown in figures 22 and 23. In fact, it is the difference in the heights (not materials) of the scintillators 308, 312 that provides different radiation detection characteristics (see figures 21-23).

According to page 2 of the Office Action, column 27, lines 23-45 of Mazess allegedly disclose the above limitations. However, column 27, lines 40-42 of Mazess actually states, “The scintillation materials 308, 312 are selected according to the desired energy sensitivity of the detector element according to methods known in the art.” As such, the cited passage merely discloses that the scintillation material 308 and the scintillation material 312 may be selected in different embodiments (embodiments with different energy sensitivities). However, it is understood that in each of the different embodiments, the scintillator materials 308, 312 would be the same. This is because Mazess specifically teaches varying the height of the scintillators

308, 312 (i.e., instead of constructing scintillator 312 using a material that is different from that used to construct scintillator 308) to provide different energy detection.

Also, according to page 10 of the Office Action, because Mazess discloses both high-energy and low-energy detectors, it is implicit that different materials be used for the high and low energy detectors, respectively. However, as discussed, Mazess teaches that the scintillator materials 308, 312 be the same, while varying the heights of the scintillator material 308 and the scintillator material 312 to thereby provide different energy detection capabilities. Thus, there is no teaching to use different materials for different energies but instead to use different thicknesses of a given material.

For at least the foregoing reasons, claims 1 and 9, and their respective dependent claims, are believed allowable over Mazess.

Claims 29, 31, 32, 34, 35, 37, and 38 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent Application Publication No. 2002/0191751 (Bogatu).

Claim 29 recites a photoconductor layer *aligned* with the first and the second filters, wherein the first and second filters *are coupled* to the photoconductor (Emphasis Added). Claim 35 recites a conversion layer *aligned* with the first and the second filters, wherein the first and second filters *are coupled* to the conversion layer (Emphasis Added). Bogatu does not disclose or suggest the above limitations. Rather, Bogatu discloses filters 32, 34 that are physically decoupled from array 22 (see figure 8A), and therefore, in fact discloses the opposite of what is claimed.

According to page 11 of the Office Action, Bogatu discloses filters that are optically coupled to photoconductors, and therefore discloses the above limitations. However, Applicant respectfully submits that the “coupled” limitation recited in claims 29 and 35 cannot be anticipated by a reference that merely discloses optical coupling. This is because claim 29 actually requires the first and the second filters be both (1) *aligned* with a photoconductor layer (which corresponds to optically coupling), and (2) *coupled* to the photoconductor layer. As such, considering Bogatu as disclosing filters that are “coupled” to a photoconductor layer when

Bogatu merely discloses alignment of the filter with the photoconductor layer (i.e., optical coupling) would render the “aligned” limitation superfluous (also, Applicant respectfully notes that different limitations in a claim are presumed to have different meanings). Similar arguments apply with respect to claim 35, which requires the first and the second filters be both (1) *aligned* with a conversion layer, and (2) *coupled* to the conversion layer.

For at least the foregoing reason, claims 29 and 35, and their respective dependent claims, are believed allowable over Bogatu.

II. CLAIM REJECTIONS UNDER U.S.C. § 103

Claims 4, 5, 18-23, 25-28, 41, 45, and 47-55 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bogatu in view of Barnes.

Claims 18, 41, and 52

Claim 18 recites that the plurality of first photoconductor elements and the plurality of second photoconductor elements *form a surface* (Emphasis Added). Claim 41 recites that the plurality of first imaging elements and the plurality of second imaging elements *form a surface* (Emphasis Added). Claim 52 recites a plurality of first imaging elements made from a first photoconductor that has a first radiation detection characteristic, and a plurality of second imaging elements made from a second photoconductor that has a second radiation detection characteristic, wherein one of the plurality of first imaging elements and one of the plurality of second imaging elements are *arranged side-by-side* (Emphasis Added).

Applicant agrees with the Examiner that Bogatu does not disclose or suggest first and second photoconductor elements. According to the Office Action, Barnes discloses different semiconductor materials, and therefore, it would have been allegedly obvious to modify Bogatu to include different semiconductors as that taught by Barnes to improve detection accuracy and sensitivity. Applicant respectfully disagrees.

Bogatu discloses a detector layer 22' having detector elements 76 that are the same (Figs. 8A and 8C). Barnes, on the other hand, discloses a first detector layer 26 and a second detector layer 28 that are made from different materials (column 8, lines 23-27; figure 2). However, in

Barnes, the detector elements in the first layer 26 are all the same, and the detector elements in the second layer 28 are also the same, and therefore, the difference in materials exist only across the layers 26, 28. There is nothing in Barnes that discloses or suggests that the material from one layer (i.e., layer 22) may be combined with the material from a different layer (i.e., layer 24) to form a single layer. Also, in view of the specific teaching of Barnes that require layer 28 be behind layer 26, one of ordinary skill in the art would not modify Bogatu by selecting a material from the first layer 26 of Barnes, and selecting a second material from another layer 28 of Barnes, and placing them on the same layer 22' of Bogatu.

Further, Applicant respectfully submits that the alleged combination of Barnes and Bogatu would, at best, only result in Bogatu having a second layer made from material that is different from the first layer 22', and would not result in the first layer 22' being made from different materials.

For at least the foregoing reasons, claims 18, 41, and 52, and their respective dependent claims, are believed allowable over Bogatu, Barnes, and their combination.

CONCLUSION

Based on the foregoing, all claims are believed in condition for allowance. If the Examiner has any questions or comments regarding this amendment, please contact the undersigned at the number listed below.

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Respectfully submitted,

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